

Diversity Leadership Guide

Capturing Knowledge

Knowledge management is the acquisition and use of resources to create an environment in which information is accessible to individuals and in which individuals acquire, share, and use that information to develop their own knowledge and are encouraged and enabled to apply their knowledge for the benefit of the organization.

A Practical Guide to Knowledge Management

Sue Belade and Chris Harman, 2003

Understanding Knowledge

Data

Knowledge starts with data. Data are objective, quantifiable facts. Examples include stock prices, delivery dates, and outside temperatures. Data are what can most easily be stored in a database, which can be indexed and made searchable. Data have no meaning; they only describe what is or what was. The first step on the path to knowledge is data.

Information

Once you have data, you have the basis for information. Information is data with meaning. It puts the data into context; for example, "Today's temperature is lower than normal," "This stock price is higher than it was last week," "The delivery date will be sooner than you expected." The data in each case have an added dimension of meaning, a relationship to other data that makes them information.

Knowledge

Knowledge is information with intrinsic value—implications or connections; for example, "The lower temperature means we need to order more fuel oil," and "The high stock price reflects the value of businesses in that market sector." The addition of this dimension of value or relationship can only come from people. It's people, through their experiences and insight, who turn information into knowledge. And it's knowledge that has the highest value to a organization, for knowledge leads to action.

In the end, it's the application of knowledge that brings about change—new products, new services, or more efficient operations. And it all begins with data that are synthesized into applicable knowledge. By understanding the relationships between data, information, and knowledge, you'll be better able to support your organization's implementation of knowledge management processes.

Knowledge Creation

Knowledge creation is part art and part science. The art comes from intuition and thinking outside the box. The science comes from some logical steps a team can take to create new knowledge.

Creating knowledge means learning how to analyze business scenarios to determine if knowledge has been created. Steps in the process include 1) sharing what's known; and 2) dreaming of new ideas.

Sharing what's known

The first step in creating knowledge is to share your current knowledge with your creative team or group. This knowledge sharing forms the common ground from which everyone moves forward. It's important that both tacit and explicit knowledge be shared.

Tacit knowledge is the hidden knowledge people carry. It comprises insight, intuition, skills, experience, and other knowledge that hasn't been formally captured.

Explicit knowledge is known and defined. It's captured in the form of reports, drawings, notes, and other materials. Tacit knowledge becomes explicit through sharing.

The way to know if knowledge sharing has taken place is to ask yourself if everyone has contributed to the common knowledge. If not, then there's more to do before moving on. Everyone's knowledge is valuable.

Dreaming of new ideas

After a group has developed a common knowledge base, it can move to the second step, which is to dream of new ideas. This is the creative aspect during which people move outside the box with their ideas about the product, service, process, or area being discussed.

Prejudgment is one of the quickest dream killers around. During this creative step, **refrain from prejudging** other people's ideas. It's important that the people in the group feel free to share any ideas they come up with. Creative endeavors are like dreaming. Let your mind go, and **don't be bound to current ideas or thoughts**. That *blurred* area of daydreaming is a fine state of mind to be in for the creative process. Explore all the ideas that come to mind. Go down all the paths, and go out on all the branches that come out of that idea. If what someone says triggers an idea, then share your thoughts. They're important, and they might trigger someone else's thinking.

Encourage everyone in the room. **Be positive and supportive**. The creative process is meant to be fun and stimulating. Remember to find the best in each other. It's important to any group dreaming up new ideas to be nonjudgmental and supportive.

The way to know if you have knowledge is that you've collected data, derived **information**, and discovered **knowledge**. Without following this progression, you don't have knowledge; you have assumptions. By understanding the steps in creating new knowledge, you can help your organization expand its knowledge base. Creating new knowledge is one of the most important activities your organization will undertake. In a rapidly changing world, it's the development and use of new knowledge that will keep your organization growing and prosperous. Never underestimate the power of knowledge creation.

Identifying Internal Knowledge Sources

Take a moment to think of the internal sources of knowledge at your organization. What did you think of? Computers and books? People? Actually, computers and books are repositories. The sources of knowledge are your people—individuals and teams. Internal knowledge sources include everyone in your organization. Everyone is a possible source of new knowledge. Some suppliers, clients, or partners may be so essential to your business that they seem to be internal sources. But they're actually external in nature.

Individuals

Individuals are the fundamental source of knowledge. It's from people, through their inspiration and perspiration that knowledge arises. The process varies from person to person, but generally there are two paths.

Focused introspection and synthesis are how many people create. A person works with knowledge and, through her own insight, develops new knowledge.

Spontaneous creation is how some ideas come into being. They come in dreams or daydreams, slipping into someone's mind when least expected.

Teams

Teams are the most common form of group interaction for knowledge development in companies. Teams usually have the following special characteristics:

- They're usually brought together by management.
- They're focused on a project or task with specific parameters.
- The members have specific expertise or experience.

Capitalizing on your organization's internal knowledge sources is fundamental to knowledge creation.

Overcoming Organizational Barriers to Knowledge Creation

Have you ever been on a project only to have it grind to a halt because someone changed directions? Have you had a rule or a procedure stop you from completing something as quickly as possible or from completing it at all? Organizational barriers stop you from doing what you want and can hinder knowledge creation. It's up to you and your team to overcome these barriers.

Some organizational barriers to knowledge creation come in the form of negative stories about the organization, internal procedures that actually hinder people, or negative paradigms that hamper knowledge creation. You can learn how to transform these barriers by **telling positive stories and supporting positive paradigms**.

Telling positive stories

Negative stories represent one kind of barrier. When told, they can engender fear and bring the knowledge-creation process to a halt. The way to overcome this type of barrier is to tell positive stories. Look for opportunities to tell positive stories that support the creation process. Stories of success or positive results help create an open atmosphere. Redirect negative stories in a polite way if you can. Either change the conversation or bring in a positive story. There's almost always a positive story you can draw on to help overcome the barrier of a negative organization story.

Continued on Page 4

Overcoming Organization Barriers...

Continued from Page 3

Supporting positive paradigms

Paradigms make up an organization's worldview. Knowledge-creation activities tend to be filtered through that worldview. Paradigms are reflected in vision statements and organizational culture. The idea is to support positive paradigms by supporting expansive, inclusive worldviews. Paradigms that are too narrow can constrain creative efforts.

Diminish negative paradigms by actively supporting paradigm shifts to worldviews that are more positive. Recognizing and overcoming barriers in your organization empowers knowledge creation. It's up to you, as an activist, to help your organization reduce its barriers and support positive change. Your actions can have a ripple effect that will help others support the organization in unexpected ways. Understanding knowledge management is an art. It takes time, intuition, and practice to become adept at being an activist for knowledge. In the long run, it will help you and your organization.

Ideas for Dialogue

- * Are you a knowledge creation activist? How?
- * What are your organization's internal knowledge sources?
- * How does your organization create knowledge—what are some of the barriers?
- * How does the Agency (all Centers and HQ) share knowledge?

Instructions: Use this SkillGuide to help you recognize, and overcome, barriers to knowledge creation in your organization. In the Barriers column, enter the titles or synopses of negative stories, obstructive procedures, or negative paradigms in your organization. In the Ways to Overcome column, enter the titles or synopses of positive stories, helpful procedures, or positive paradigms that could overcome the corresponding barriers.

Excerpted from SkillSoft

Office Chief: AD/Robyn Gordon
NASA Contact: AD/Vanessa Webbs
diversity@grc.nasa.gov
<http://www.grc.nasa.gov/WWW/diversity>

Barriers	Ways to Overcome
Negative Stories <ul style="list-style-type: none">••••	Positive Stories <ul style="list-style-type: none">••••
Obstructive Procedures <ul style="list-style-type: none">••••	Helpful Procedures <ul style="list-style-type: none">••••
Negative Paradigms <ul style="list-style-type: none">••••	Positive Paradigms <ul style="list-style-type: none">••••